Course Syllabus
Course Number: Biological Basis of Behavior 18:820:622
Summer 2018

Course meeting times and location: Monday, 9am to 5pm, Allison Road Classroom 204
Begin Date 05/14/18
End Date (Final Exam) 06/25/18

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Course Description

Course Overview:
This three-credit course will provide you with an understanding of biopsychology. Biopsychology is the science of the biological bases of human behavior, the field that concerns itself with linking function with brain structure. This science is also sometimes referred to as “functional neuroanatomy” or “behavioral neuroanatomy”. It is impossible to understand human behavior without some level of understanding of the physical structure of the brain, the organ that enables behavior. While a sense of the molar (general or large-scale) structure is essential for a basic recognition of the master organ of the body, an appreciation of the molecular (denser, inner-intricacies) provides a foundation and insight to the complex nuances of human behavior.

At the end of this course, you should:

- Have an overview of the working brain and a general theoretical understanding of how the brain is related to human behavior
- Have a specific understanding of the way in which many particular aspects of cognitive and personality functioning relate to brain structures
- Conceptualize how the science can be applied to actual clinical practice and to your own capacity to consider and understand human behavior
- Be able to consider issues relating to diversity and individual differences as they related to brain structure and functioning

Course Texts and Materials

Required Texts:


Supplemental material:
1. Recommended papers: will be provided on an ongoing basis
2. Tutorial videos: links will be provided in class

Course Requirements
Two examinations and one special topics paper or presentation (TBD in classroom discussion)
The exams each account for 35% of the final course grade (total of 70%). The special topics paper accounts for the remaining 30%. Exams will be completed in class and will include both short answer and multiple choice elements. The special topics paper should be on a neuropathology of a specific brain system and focus on the biological basis of this pathology. Topics must be approved by the instructor.

COURSE SCHEDULE: CALENDAR, TOPICS, READING LIST

Week 1: May 14, 2018
Topic: Introduction to Bio Basis and review of syllabus

Topic: Neuroanatomy and Basic Definitions
Readings Chapter 2: Neuroanatomy Overview and Basic Definitions

Topic: Cranial Nerves
Reading: Chapter 3: The Neurologic Exam as a Lesson in Neuroanatomy pp. 58-62

Topic: Neuroimaging
Reading: Chapter 4: Introduction to Clinical Neuroradiology

At home:
Topic: The Neurological Exam
Reading: Chapter 3: The Neurologic Exam as a Lesson in Neuroanatomy. THEN VIEW THE Neurologic Examination (neuroexam.com)

Week 2: May 21, 2018
Topic: The Brain and Its Environs
Readings: Blumenfeld: Chapter 5: Brain & Environs

Topic: Motor and Somatosensory Pathways
Readings: Blumenfeld: Chapter 6 & 7: Corticospinal Tract & Somatosensory Pathways

Topic: Cerebral Hemispheres & Vascular Supply
Readings: Blumenfeld: Chapter 10: Cerebral Hemispheres & Vascular Supply
Week 3: May 28, 2018 – No Class Memorial Day Holiday

Week 4: June 4, 2018

EXAMINATION I (9am – 11am)

Topic: Overview of the Working Brain
Readings: Luria: Pages 1-227

Topic: Intro to Neuropsychology / Clinical Case Presentation
Reading: Articles to be provided & Blumenfeld Chap. 1

Week 5: June 11, 2018

Topic: Limbic System: Memory and Emotion
Reading: Blumenfeld Chap. 18: Limbic System: HOME

Topic: Dominant hemisphere and Language
Reading: Blumenfeld Chap. 19

Topic: Nondominant hemisphere and Spatial Processing
Reading: Blumenfeld Chap. 19

Week 6: June 18, 2018

Topic: Frontal Lobes: Anatomy and Function
Reading: Blumenfeld Chap. 19

Topic: Occipital Lobes: Higher Level Visual Processing
Reading: Blumenfeld Chap. 19

Week 7: June 25, 2018

FINAL EXAMINATION (9am – 11am)

Topic: Abnormal Neuropsychology
Readings: Articles will be provided
UNIVERSITY POLICIES

Attendance:

Every student is expected to participate in each of his/her courses through regular attendance at lecture sessions. It is further expected that every student will be present, on time, and prepared to participate when scheduled class sessions begin. Attendance will not be a component of course grading.

Students are expected to attend class and complete assignments as scheduled, to avoid outside conflicts (if possible), and to enroll only in those classes that they can expect to attend on a regular basis. Absences from class are handled between students and instructors. The instructor may require documentation to substantiate the reason for the absence. The instructor should provide make-up opportunities for student absences caused by illness, injury, death in the family, observance of religious holidays, and similarly compelling personal reasons including physical disabilities. For lengthy absences, make-up opportunities might not be feasible and are at the discretion of the instructor.

Academic Integrity Policy:

Academic dishonesty is any attempt by the student to gain academic advantage through dishonest means, to submit, as his/her own work that which has not been done by him/her or to give improper aid to another student in the completion of an assignment. Such dishonesty would include, but is not limited to: submitting as his/her own a project, paper, report, test, or speech copied from, partially copied, or paraphrased from the work of another (whether the source is printed, under copyright, or in manuscript form). Credit must be given for words quoted or paraphrased. The rules apply to any academic dishonesty, whether the work is graded or ungraded, group or individual, written or oral.

Americans with Disabilities Act (ADA) Policy:

Any student who has a documented disability and is in need of academic accommodations should notify the professor of this course and contact the Office of Differing Abilities Services. Accommodations are individualized and in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1992.